

## AMENDMENTS TO THE SPECIFICATION:

*Please replace page 3, line 4 with the following:*

where  $t \in \mathbb{R}$ ,  $x \in \mathbb{R}^n$ , and  $\lambda \in \mathbb{R}^m$  represents time, an n-dimensional state space,

*Please replace page 3, lines 14 – 15 with the following:*

a solution of  $x(t) = (t, x_0, \lambda)$  if  $-\infty < t < \infty$ , with respect to any initial value  $x_0 \in \mathbb{R}^n$  and all the system parameters  $\lambda \in \mathbb{R}^m$ :  $x(0) = (0, x_0, \lambda) = x_0$ .

*Please replace page 4, line 2 with the following:*

In the case where the solution  $x(t) = (t, p_0, \lambda)$  of differential equation (1)

*Please replace page 4, line 6 with the following:*

the point  $p_0 \in \mathbb{R}^n$  satisfying eq. (5) is called a fixed point with respect to map T.

*Please replace page 5, lines 2-4 with the following:*

where  $T(x_0, \lambda)$  can be expressed as  $T(x_0, \lambda) = [T_1(x_0, \lambda), T_2(x_0, \lambda), \dots, T_n(x_0, \lambda)]^T$ ,  $x_0 = x(0) = [x_1(0), x_2(0), \dots, x_n(0)]^T$ , and  $\lambda = [\lambda_1, \lambda_2, \dots, \lambda_m]^T$ , respectively. Further,  $\mathbb{R}^N$  is defined as:

where  $T(x_0, \lambda)$ ,  $x_0$ , and  $\lambda$  can be expressed as  $T(x_0, \lambda) = [T_1(x_0, \lambda), T_2(x_0, \lambda), \dots, T_n(x_0, \lambda)]^T$ ,  $x_0 = x(0) = [x_1(0), x_2(0), \dots, x_n(0)]^T$ , and  $\lambda = [\lambda_1, \lambda_2, \dots, \lambda_m]^T$ , respectively. Further,  $\lambda_u \in \mathbb{R}^N$  is defined as:

*Please replace page 5, line 9 with the following:*

expressed as  $u \in \mathbb{R}^{n+N}$ :  $u = [x_0^T, \lambda_u^T]^T$ , and then an iterative calculation:

*Please replace page 5, lines 12-13 with the following:*

is performed until the termination condition of  $\|u^{k+1} - u^k\| < \delta$  is satisfied, where  $F' \in \mathbb{R}^{(n+N) \times (n+N)}$  represents the Jacobi matrix of F, i.e.,

*Please replace page 6, lines 11 – 14 with the following:*

and  $(t, u^k)$ . That is, if eqs.(11) are solved from 0 to  $t_T$  or  $t_{ck}$  with the Runge-Kutta Method,  $(t_T, u^k)/x_0$ ,  $(t_{ck}, u^k)/x_0$ ,  $(t_T, u^k)$ , and  $(t_{ck}, u^k)$  can be derived.  $T_k$  is a function of  $\varphi$ , and also  $g_k$  can typically be expressed as a function of  $\varphi$ , and therefore, from these values,  $T_k(u^k)/x_0$ ,

and  $\partial \varphi (t, u^k)/\partial \lambda$ . That is, if eqs.(11) are solved from 0 to  $t_T$  or  $t_{ck}$  with the Runge-Kutta Method,  $\partial \varphi (t_T, u^k)/\partial x_0$ ,  $\partial \varphi (t_{ck}, u^k)/\partial x_0$ ,  $\partial \varphi (t_T, u^k)/\partial \lambda$ , and  $\partial \varphi (t_{ck}, u^k)/\partial \lambda$  can be derived.  $T_k$  is a function of  $\varphi$ , and also  $g_k$  can typically be expressed as a function of  $\varphi$ , and therefore, from these values,  $T_k(u^k)/\partial x_0$ ,

*Please replace page 7, line 1 with the following:*

$T_k(u^k)$ ,  $g_k(t_{ck}, u^k)/x_0$ , and  $g_k(t_{ck}, u^k)$   $T_k(u^k)/\partial \lambda$ ,  $g_k(t_{ck}, u^k)/\partial x_0$ , and  $g_k(t_{ck}, u^k)/\partial \lambda$  can be numerically derived.

*Please replace page 7, line 3 with the following:*

above-described calculation, and consequently  $u_{\lambda}$  that is the design value of the

*Please replace page 7, line 20 with the following:*

current waveform  $x(t) = (t, x_0)$   $x(t) = \varphi (t, x_0, \lambda)$  by providing the circuit equation in an explicit

*Please replace page 10, lines 1-3 with the following:*

variable  $x$ , it is assumed that a solution (output waveform) of  $x(t) = (t, x_0)$   $x(t) = \varphi (t, x_0, \lambda)$

can be observed with respect to any initial value  $x_0 \in \mathbb{R}^n$   $x_0 \in \mathbb{R}^n$  and all system

parameters  $\mathbb{R}^m$   $x(0) = (0, x_0)$   $x_0 \in \mathbb{R}^m$   $x(0) = \varphi (0, x_0, \lambda) = x_0$ , where  $x(t)$  has periodicity of period  $t_T$

*Please replace page 10, lines 9-10 with the following:*

necessarily a function of time  $t_{c1} \sim t_{cn}$ , but functions of  $x_0$  and  $\{\cdot\} \lambda$ . Consequently,  
in the prior method, only a condition for a time response  $\{\cdot\} \varphi$  at a certain time  $t_c$

*Please replace page 10, line 16 with the following;*

responses  $\{\cdot\} \varphi$  derived from the circuit equation, observations in a domain other

*Please replace page 10, line 25 with the following:*

observed  $x(t) = (t, x_0, \cdot) \underline{x(t) = \varphi(t, x_0, \lambda)}$ . On the other hand, the elements of the Jacobi

*Please replace page 11, line 11 with the following:*

where  $\{\cdot\} \varepsilon$  is an infinitesimal coefficient  $g(u_{\varepsilon i})$  can be derived by substituting  $u_{\varepsilon i}$

*Please replace page 11, line 15 with the following:*

and consequently the design value  $\{\cdot\} \lambda_u$  is decided, whereby the design of the

*Page 12, please delete lines 26 and 27.*

*Page 13, please delete in its entity.*